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MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY.
UNITED STATES DEPARTMENT OF AGRICULTURE

Number 29.

September 1916.

BUREAU VISITORS DURING SEPTEMBER.

Mr. E. L. Worsham, State Entomologist of Georgia, visited the Bureau of Entomology on September 25.

EXCESS WEIGHT UNDER GOVERNMENT FRANKS PROHIBITED.

A recent order of the Postmaster General is to the effect that packages of merchandise or similar matter exceeding four pounds in weight will not be accepted under Government franks. Heavy shipments, whenever possible, should be divided so as to come within the weight allowed to be mailed under the franking privilege. All packages weighing over four pounds should be shipped either by express or freight.

RECENT PUBLICATIONS OF THE BUREAU OF ENTOMOLOGY.

The New Mexico range caterpillar and its control, V. L. Wildermuth & D. J. Caffrey. Dept. Bull. 443.

Important insects which may affect the health of men and animals engaged in military operations, Circ. 61, Office of the Secretary.

Life-history studies of *Cirphis unipuncta*, the true army worm, J. J. Davis & A. F. Satterthwait. Journ.Agr.Res. V.6, No.21, K-40.

Thersilochus conotrachelii, a parasite of the plum curculio, R. A. Cushman. Journ.Agr.Res. V.6, No.22, K-41.

An important dipterous enemy of plant-lice, *Apidobletes meridionalis*, J. J. Davis. Journ.Agr.Res. K-42.

Bureau of Entomology, Bull. new series, 94, Contents & Index.

" " " Bull. new series, 99, Contents & Index.

" " " Bull. new series, 109, Contents & Index.

" " " Bull. new series, 96, Contents and Index. Technical Series

No. 19, Contents & Index is in press. Contents & Indices for Technical Series

Nos. 16, 17, 20, are in course of preparation.)

Dr. G. F. White has concluded his investigations of bee diseases and will be on furlough until April 1, 1917, at which time he will resume insect disease investigations and will be connected with the office of Cereal & Forage Insect Investigations.

LIBRARY

Miss Mabel Colcord, Librarian.

NEW BOOKS

New Books

American florist company's directory. Ed. 24. Chicago, 1916.

American medical directory. Ed. 5. Chicago, 1916. 2340p.

- Banks, Nathan. District of Columbia Diptera: Syrphidae. By Nathan Banks, C. T. Greene, W. L. McAtee and R. C. Shannon. (Proc. Biol. Soc. Washington v.29, p.173-204. Sept.22,1916)
- Blatchley, W. S. and Leng, C. W. The Rhynchophora or weevils of North-Eastern America. Indianapolis, 1916.
- Brunner, Lawrence. Preliminary catalogue of orthopteroid insects of the Philippine Islands. Lincoln, 1915. (Nebraska Univ. studies v.15, no.2, p.195-281)
- Burmeister, Hermann. Reise durch die La Plata-staaten... 1857, 1858, und 1860. Halle, 1861. 2v., maps.
- Fantham, H. B. The animal parasites of man. By H. B. Fantham, J. W. W. Stephens, and F. V. Theobald... Partly adapted from Dr. Max Braun's "Die tierischen parasiten des menschen (4th ed.,1908) and an appendix by Dr. Otto Seifert. New York, 1916. 900p. illus.
- Florists' exchange. Greenhouse heating. A reprint of four prize essays which recently passed through the columns of the Florists' exchange, with comments by John McArthur. New York, 1916. 52p.
- Kholodkovskii, N. A. Chermes injurious to the Coniferae. (In Russia) Petrograd, 1915. 89p. illus., plates.
- Mickwitz, R. Nosema apis (smittosam utsot hos bina). Helsingfors, 1916. 14p. illus. (Finland-Landbruksstyrelse. Meddelanden no.110)
- Nyasa protectorate- Dept. of Agriculture. The cigarette beetle. (Lasioderma serricorne, F) By C. Mason. Zomba, 1915. 4p. 4' (No. 3 of 1915)
- The Pharmacopoeia of the United States of America. 9th decennial revision. By authority of the United States pharmacopoeial convention held at Washington D. C. May 10, 1910... official from Sept. 1, 1916. 728p.
- Queensland- Bureau of sugar experiment stations- Division of entomology. Bulletin no.4. 1916. On the value of poisoned bait for controlling cane grubs. By Edmund Jarvis.

SEE CULTURE

E. F. Phillips, In Charge.

Geo. H. Rea, former state inspector of apiaries of Pennsylvania, has been appointed Agent to conduct the extension work in beekeeping in North Carolina for this Bureau, in cooperation with the North Carolina College of Agriculture and Mechanic Arts, Raleigh. He will be under the administrative supervision of the State Entomologist, Franklin Sherman, Jr. Mr. Rea spent a few days in Washington and left for North Carolina on September 18.

Messrs. E. R. Root and H. G. Rowe of the editorial force of Gleanings in Bee Culture visited the Drummond Laboratory September 14-15.

Dr. James A. Nelson was on leave for two weeks ending September 9.

Dr. E. F. Phillips served as delegate at the Phi Beta Kappa Council in Philadelphia, September 12-13.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, In Charge.

E. W. Scott made a trip to points in New Jersey and will visit points in Michigan in connection with testing the efficacy claims of proprietary insecticides in orchards.

A. J. Flebut, who has been working under the direction of Dr. W. D. Hunter, has been transferred to the Office of Deciduous Fruit Insect Investigations, and will be connected with an investigation of chestnut weevils. Messrs. W. B. Wood and A. J. Flebut made a trip to Chambersburg, Pa., in connection with experiments against chestnut weevils.

E. R. Selkregg, who has been assisting H. G. Ingerson at Sandusky, Ohio in grape berry-moth investigations, has returned to college at Amherst, Mass., to complete his studies, leading towards the degree of B. S.

J. K. Primm, who has been assisting Dwight Isely at North East, Pa., in connection with grape-insect investigations, will have completed his work by October 1 and his appointment terminated on that date.

FEDERAL HORTICULTURAL BOARD.

C. L. Marlatt, Chairman.

(In Cooperation with the Bureau of Entomology.)

Dr. W. G. Anching Kung of China recently visited the fumigation plants in Boston.

The Vacuum Company of Boston is making extensive improvements in its plant. When completed this plant will consist of two cylinders 116 ft. long by 9 ft. in diameter and two square fumigation chambers 100 ft. long by 7 ft. square. An elaborate bell and indicator system will be installed which will enable the operator to manage all the work without accident.

The members of the Federal Horticultural Board recently visited the fumigation plants located in Boston, Brooklyn and Newark.

A. G. Webb of Boston has been temporarily transferred to Minnesota to examine Canadian potatoes for potato diseases.

J. S. P. Carpenter has just completed an inspection of southern cotton mills and has returned to his permanent headquarters in Boston.

H. H. Willis, who has been temporarily assigned to Newark, New Jersey, has been transferred to Brooklyn with headquarters at the Vacuum Fumigation Plant which is fumigating at the Bush Terminal.

FOREST INSECT INVESTIGATIONS.

A. D. Hopkins, In Charge.

Mr. Craighead will leave the 1st of October to make a preliminary study of a trouble affecting the oaks in the South Atlantic and Gulf States. The exact cause of the trouble is not known but it appears to be a combination of *Prionus* affecting the roots, and *Agrilus bilineatus* and *Pityophthorus pruinosus* in the trunks and branches.

SOUTHERN FIELD CROP INSECT INVESTIGATIONS

W. D. Hunter, In Charge.

B. R. Coad, Tallulah, La., was in Washington for a conference on September 18 and 19.

E. S. Tucker, formerly of the Louisiana Experiment Station, has been appointed a temporary field assistant to determine the spread of the boll weevil in Western Texas, and in Oklahoma and Arkansas.

T. C. Barber made an extensive trip through Georgia during the latter part of this month.

Dr. Henry Fox of the Cereal and Forage Crop Insect Investigations, who has been stationed at Charlottesville and Tappahannock, Va., has been transferred to this section effective October 1. He will be engaged in the investigation of insects concerned in the transmission of the tobacco mosaic disease under Mr. A. C. Morgan, Clarksville, Tenn.

W. D. Pierce attended a conference at Chattanooga, Tenn., on September 9, for the purpose of determining questions in which the States of Georgia and Tennessee were involved. He also made inspections of cotton fields in the vicinity of Norfolk, Va., during the month.

Dr. W. D. Hunter, in company with other members of the Federal Horticultural Board, inspected the cotton fumigating plants in Boston and New York on the 13th and 14th of September.

TROPICAL AND SUBTROPICAL INSECT INVESTIGATIONS

C. L. Marlatt, In Charge.

J. R. Horton has completed his Argentine ant investigations in California and will report in Washington about October 1 to go over plans of future work.

D. G. Tower, who has been temporarily located in New York supervising the fumigation plants for the Federal Horticultural Board, has returned to Washington.

TRUCK CROP AND STORED PRODUCT INSECT INVESTIGATIONS

F. H. Chittenden, In Charge.

J. G. Hester, field assistant, stationed at Brownsville, Texas, has resigned. Mr. Hester collected the Colorado potato beetle (*Leptinotarusa decimlineata*) on egg-plant, at a locality farther south than the species has ever been recorded hitherto in the United States.

H. L. Weatherby, owing to pressure of other duties, has been obliged to resign as field assistant to H. O. Marsh at Rocky Ford, Colo.

The following resignations, in the force working on the control of insects as carriers of cucurbit diseases, have become effective: James I. Hambleton, field assistant, located at the University of Wisconsin, cooperating with N. F. Howard; William N. Ankeny, stationed at Big Rapids, Mich.; A. H. Robinson, assisting H. K. Larrimore, at Plymouth, Ind.

Arthur J. King, who is stationed at Vashon, Wash., studying root-maggots, especially the cabbage root-maggot, has returned to the University of Washington.

F. A. Johnston, entomological assistant, who has been engaged at Big Rapids, Mich., in an investigation of the relation of insects to cucurbit diseases will return to Hart, Mich., at the completion of his studies.

CEREAL AND FORAGE INSECT INVESTIGATIONS
W. R. Walton, Acting in Charge.

E. H. Gibson, recently in charge of the Laboratory of Missouri, has been relieved and will be stationed at Washington, D. C., for the present.

Dr. Henry Fox of the Charlottesville, Va., Laboratory force has been transferred to the Southern Field Crop Investigations and will be stationed at Clarksville, Tenn., after October 1.

It has been decided to transfer the laboratory now located at Pasadena, Cal., to Martinez, Cal., about November 1.

Prof. H. F. Wickham, who has been temporarily attached to the Wellington, Kans., Laboratory, has returned to his home at Iowa City to take up his regular work at the University.

NEWS ITEMS FROM THE TEMPE (ARIZ.) FIELD STATION.

September 21, 1916.

The fall army worm, *Laphygma frugiperda*, has been exceptionally numerous during the past month doing considerable damage to corn.

The most notable recent damage caused by insects in Southern Arizona was that of the alfalfa caterpillar, *Eurygaster eurythema*. The worms were especially numerous, and had it not been for a contagious disease which finally brought it under control, the damage would have been much more severe than it was. Irrigation of certain fields proved at this time to be an almost certain check upon the outbreak, since the added moisture was conducive to the further development of the disease, and the worms died within a few days after the water was applied.

(Signed) V. L. Wildermuth.

NEWS ITEMS FROM MAXWELL (N. M.) FIELD STATION.

September 23, 1916.

Hemileuca oliviae - Ninety-five percent of species now in the pupal stage.

Skunks are destroying a large percentage of the pupae originally present.

Pentatoma sayi - Very rare in localities where it was formerly a serious pest.

A few large nymphs and adults found during the past month.

Grasshoppers - Are not numerous enough to be considered a pest, in localities where they were very destructive at this date last year.

Heliothis oncolepta - Very numerous in all varieties of field corn, and causing considerable loss.

Diabrotica 12-punctata var. *tenelliales* not numerous enough on corn to cause appreciable damage, as was the case last year.

(Signed) D. J. Caffrey.

NEWS ITEMS FROM THE GAINESVILLE (FLA.) FIELD STATION.

Sept. 23, 1916.

The velvet bean caterpillar has damaged thousands of acres of velvet beans during the past month, and little effort has been made by the farmers to control it. The so called "cholera" (*Botrytis Rileyi*), is now becoming effective in the field and will probably kill 90 to 95 per cent of the caterpillars, as it does about this time each year.

The appointment of George R. Bailey, who has been temporary assistant at this station since June 1, expired on August 31.

An outbreak of *Hippodamia lignosella* has just occurred on cowpeas on

the Florida Experiment Station farm and similar outbreaks have been reported from other parts of the state.

(Signed) R. N. Wilson.

NOTES FROM COLUMBIA (S. C.) FIELD STATION.

August 19, 1916.

Chinch bugs have been reported as injuring corn in the "black jack" lands of South Carolina.

E. lignosellus is common on cow peas in fields around Columbia, S. C.

The larger corn stalk-borer are abundant in corn in this region. They have also been reported as destructive in fields at Rock Hill, S. C. A Tachinid determined by Mr. Walton as *Tachinophyto variabilis* has been reared from a larva collected near this station. This is the first time a tachinid parasite has been reared from this species at this station.

A. H. Beyer has just returned from Gray, Ga., and reports *Halticus citri* as doing considerable damage to alfalfa.

U. C. Loftin of the Southern Field Crops Division stationed at New Orleans, La., and who has been making an investigational trip through the Carolinas gave this office a call.

On the evening of August 30 the city of Columbia and suburbs were visited by myriads of leafhoppers belonging to the species *Draeculacephala reticulata*. These "hoppers" were so abundant on the main thoroughfare in the city as to cause very much annoyance to pedestrians. Offices, restaurants, icecream parlors and moving-picture houses were infested some of which were forced to close up for the night. A band that was playing on the top of an eleven-story building was compelled to quit for the evening. On the following night the leafhoppers were again present but in small numbers.

(Signed) P. Luginbill.

NEWS ITEMS FROM SALT LAKE CITY (UTAH) FIELD STATION.

Sept. 21, 1916.

The work at the Salt Lake Station has been confined to the study of the alfalfa weevil, except some attention which has been paid to *Euxoa auxiliaris*, a serious menace to grain and forage crops in the Rocky Mountain Region, and some investigation of *Aphis bakeri* which damages the clover seed crop and makes it difficult to harvest by reason of the honey-dew with which it coats the heads. The great economic importance of the alfalfa weevil and the fact that it is a new pest to American agriculture compel us to concentrate our efforts largely upon it to the exclusion of many other species which are equally interesting but comparatively unimportant. Much time is devoted to the oecology of the species, which after nearly ten years of investigation is still far from being completely settled. A certain amount of time must be spent each year in tracing the annual spread and unfortunately, this work must be done at the time when control methods are being tried out, which complicates the management of the work. Hitherto it has been impossible to survey the border of the infested district oftener than once in two years. The field work with control methods, while perhaps no more important than the scouting, is nevertheless of more immediate practical value and naturally has the right of way.

The introduction of European parasites, which was begun by Mr. Fiske and enthusiastically adopted by Professor Webster, seems to be on the verge of yielding some practical results provided the parasites continue to increase in numbers at the rate which has prevailed since 1912. As many as twenty-five percent of the alfalfa

weevil larvae in a certain field in midsummer were killed by the ichneumonid parasite formerly known as **Canidia**, but now named **Bathyplectes**. This would be nearly enough protection to an infested field if it occurred at the season when the weevil larvae were most numerous, and it indicates that this parasite is adaptable to our climate and farm conditions, both of which points were doubtful when it was introduced.

The work upon **Euxoa auxilaris** has been chiefly directed toward verifying its life history and studying its many parasites. Its attack in Utah has been principally upon alfalfa, a striking variation from its habit of attacking wheat in Montana. In many fields it has destroyed the first crop entirely. We have not yet given much attention to methods of control.

Aphis bakeri has been known for years as a pest of the clover seed crop, especially in the Willamette Valley of Oregon and the Snake River Valley of Idaho. Very little attention has been paid to it by entomologists, although it is one of the most important factors in the uncertainty of clover seed production. Our work upon it is at present confined to life history studies.

Some slight attention has been paid to other economic insects as a protection against unexpected attacks, but those mentioned are the important things in our territory and have taken most of our time.

Signed,

Geo. I. Reeves.

